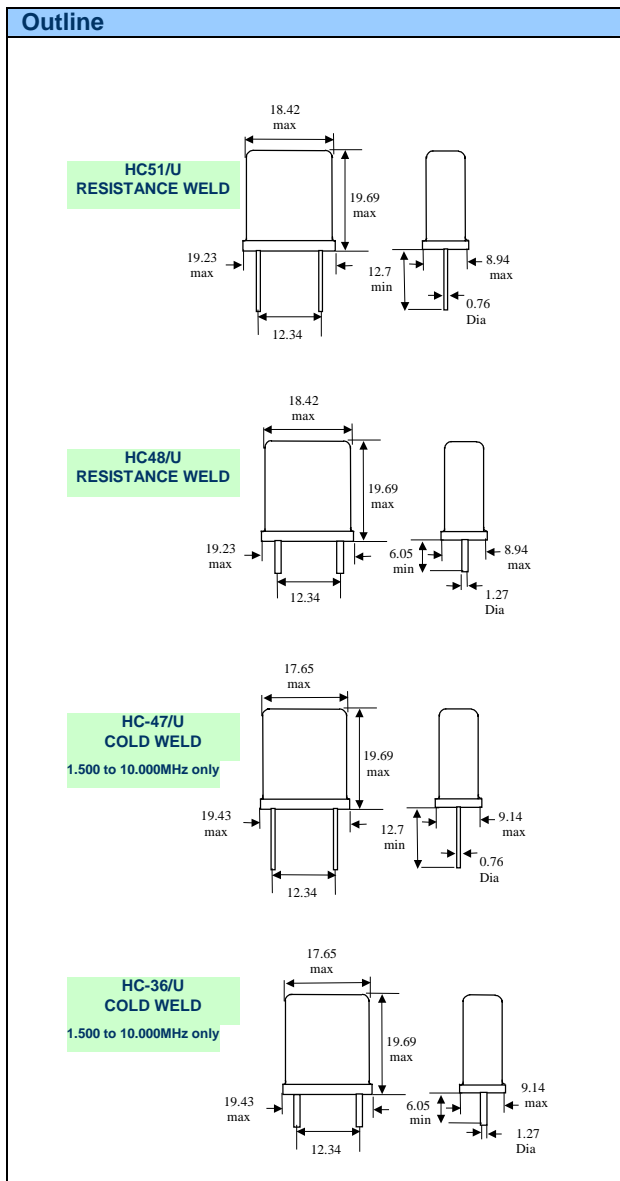




QUARTZ CRYSTAL –HC-51/U, HC-48/U, HC-47/U, HC-36/U

FEATURE

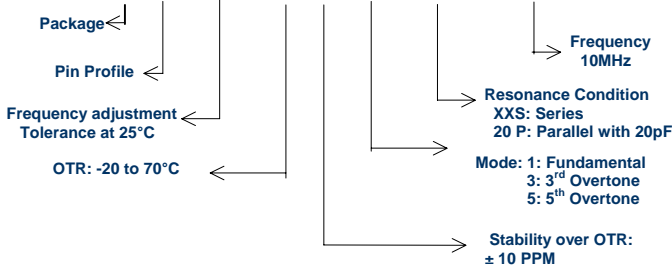
- All metal welded package
- Wide frequency range from 1 MHz upto 150 MHz



▲ All dimensions are in mm.

Ordering Information

Example
48U 2 F C D 1 20 P 010M000000



Frequency Range	1 MHz to 150 MHz
Frequency Adjustment Tolerance at 25° C	Select from table below
Operating Temperature Range	Select from table below
Frequency Stability	Select from table below
ESR	Select from table below
Drive level	100 μ Watts Typical (or specify)
Shunt Capacitance C0	7.0 pF max.
Resonance Condition	XXS – series, XXP – Parallel with xx pF (for parallel please specify the xx value in pF)
Ageing	Resistance Weld: ±3 PPM / Year Cold Weld: ±1 PPM / Year

Operating Temperature Range	
Code	Range
A	0 to +50 °C
B	0 to +60 °C
F	0 to +70 °C
D	-10 to +60 °C
E	-10 to +70 °C
C	-20 to +70 °C
G	-30 to +80 °C
H	-30 to +85 °C
I	-40 to +85 °C
J	-40 to +90 °C
K	-55 to +105 °C
L	-55 to +125 °C

Frequency Adjustment Tolerance at 25°C/Stability Over OTR	
Code	Stability
R	±3 PPM
B	±5 PPM
C	±7.5 PPM
D	±10 PPM
E	±15 PPM
F	±20 PPM
G	±25 PPM
H	±30 PPM
M	±50 PPM
K	±100 PPM

Frequency Range By Mode of Oscillation		
Fundamental	3rd Overtone	5th Overtone
1.000 to 37 MHz	20 to 85 MHz	60 to 150 MHz

Max Equivalent Series Resistance Table			
Frequency Range MHz	ESR	Frequency Range MHz	ESR
Fundamental		3rd Overtone	
1.0 to ≤1.4	500 Ω	20.0 to ≤30.0	35 Ω
1.4 to ≤2.5	250 Ω	30.0 to ≤85.0	30 Ω
2.5 to ≤3.5	150 Ω	5th Overtone	
3.5 to ≤3.9	80 Ω	60.0 to ≤100.0	70 Ω
4.0 to ≤5.0	50 Ω	100.0 to ≤150.0	80 Ω
5.0 to ≤7.0	40 Ω		
7.0 to ≤9.0	35 Ω		
9.0 to ≤12.0	30 Ω		
12.0 to ≤20.0	25 Ω		
20.0 to ≤37.0	20 Ω		

Pin Profile	Code
2 Pin Straight	2

Specifications subject to change without notice
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